



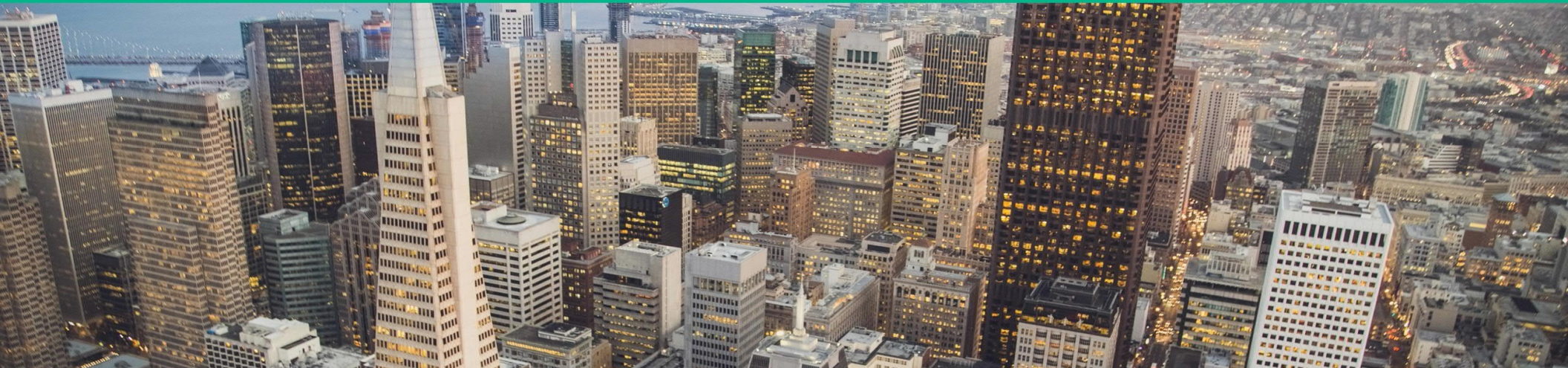
SFEnvironment

Our home. Our city. Our planet.

A Department of the City and County of San Francisco

Energy Benchmarking – Update from San Francisco

June 11, 2020



Agenda



- **San Francisco's Policy**
- **Trends**
- **Recent Updates**
- **Looking to the Future**

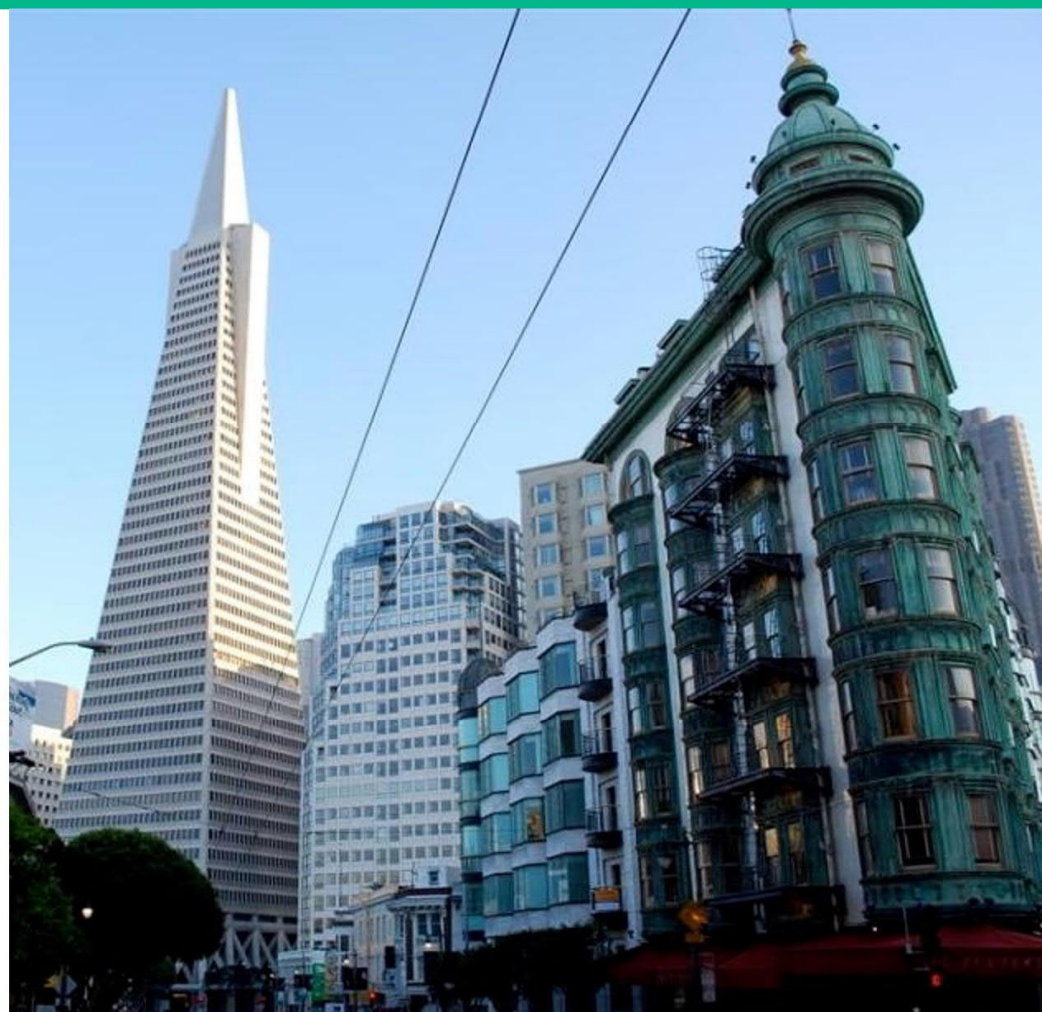


Existing Commercial Buildings Ordinance (2011)

- Applies to Non-Residential Buildings 10,000 square feet and greater

	# of Buildings	Total Floor Area
Private Sector	1,649	167 Million
Municipal	492	49 Million
Total	2,141	216 Million

- Requirements:
 - Annually report energy use
 - Energy audit or RCx every 5 years



Since Adoption – Municipal Facilities



2011 ENERGY BENCHMARKING REPORT

San Francisco
2012 ENERGY BENCHMARKING REPORT

October
San Francisco
2013 ENERGY BENCHMARKING REPORT

September
San Francisco
2014 ENERGY BENCHMARKING REPORT

September
San Francisco
2015 ENERGY BENCHMARKING REPORT

December
San Francisco
2016 ENERGY BENCHMARKING REPORT

October 2016
San Francisco Municipal
2017 ENERGY BENCHMARKING REPORT

December 2017
San Francisco Municipal E
January 2019

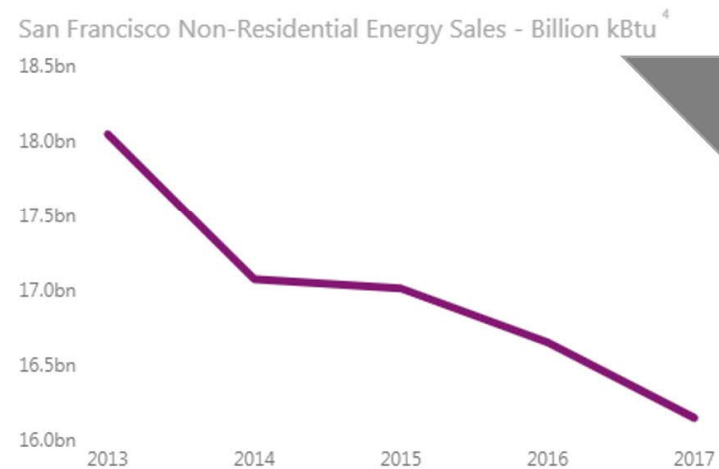
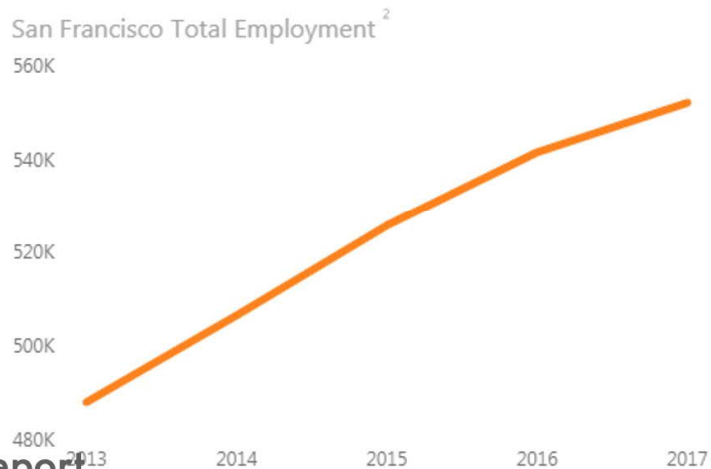
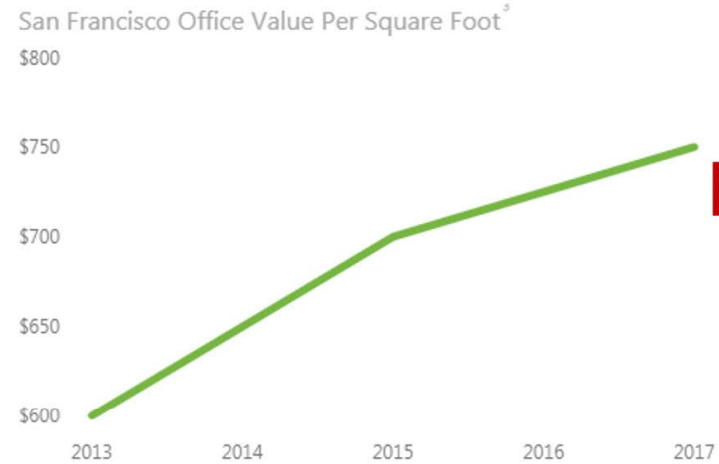
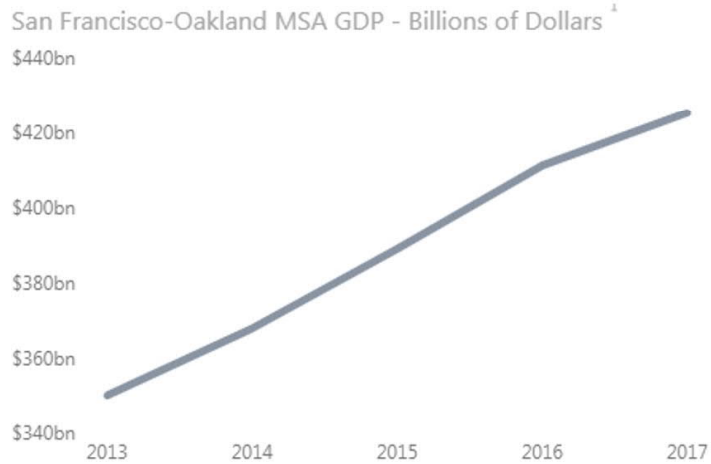
2018 ENERGY BENCHMARKING REPORT

Hetch Hetchy Power - San Francisco Municipal Buildings
January 2020

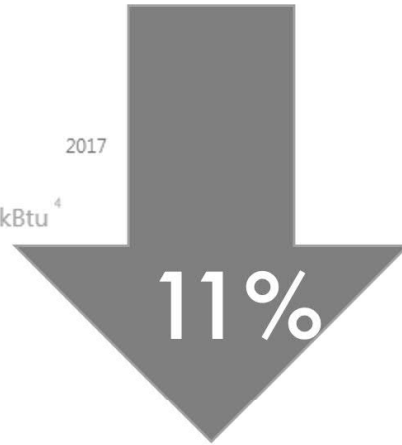
↓ 25%
CO₂e



More Jobs, Growing Economy, Using Less Energy



Energy Use



11%

More info:
<http://bit.ly/EBOreport>

Data is published via: DataSF.org



DataSF

OPEN DATA

SHOWCASE

PUBLISHING

ACADEMY

RESOURCES

BLOG

Explore

Browse Data

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Developers



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SFGov Coordinator's Portal About Help

Existing Commercial Buildings Energy Performance Ordinance Report

Data updated 8/7/2017. The Existing Commercial Buildings Energy Performance Ordinance (Environment Code ▶)

Find in this Dataset

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Discuss ²

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About

Parcel(s)	Building Name	Building Address	Postal Code	Full Address	Floor Area	Property Type - Self Selected	PIM Link
0136/002	945 FRONT ST	945 FRONT ST	94111	945 FRONT ST	22,225	Office	http://propertymap.sfplanning.org
5585/001	2225 PALOU AVE	2225 PALOU AVE	94124	2225 PALOU AVE	47,880	Non-Refrigerated Warehouse	http://propertymap.sfplanning.org
4083/001A	2345 Harrison	2345 HARRISON ST	94110	2345 HARRISON ST	53,000	Other	http://propertymap.sfplanning.org
3736/098	589 HOWARD ST	589 HOWARD ST	94105	589 HOWARD ST	15,600	Office	http://propertymap.sfplanning.org
0300/009	888 Post Street	888 POST ST	94109	888 POST ST	32,131	Mixed Use Property	http://propertymap.sfplanning.org
3998/021	550 INDIANA ST	500 INDIANA ST	94107	500 INDIANA ST	157,094	Non-Refrigerated Warehouse	http://propertymap.sfplanning.org
9900/019	Pier 19	19 Pier	94111	19 Pier	97,641	Non-Refrigerated Warehouse	http://propertymap.sfplanning.org
9900/045	45 Pier - Shed B	45 Pier - Shed B	94133	45 Pier	71,833	Other	http://propertymap.sfplanning.org
5585/003	Apparel Dorman 4-90	50 Dorman Ave	94124	50 Dorman Ave	50,422	Non-Refrigerated Warehouse	http://propertymap.sfplanning.org
5586/001	Barneveld Dorman 1-55	1-55 Dorman Ave	94124	1-55 Dorman Ave	37,550	Non-Refrigerated Warehouse	http://propertymap.sfplanning.org
1443/040	1019 CLEMENT ST	1019 CLEMENT ST	94118	1019 CLEMENT ST	14,500	Urgent Care/Clinic/Other Outpatie	http://propertymap.sfplanning.org
3733/083	841 HOWARD ST	841 HOWARD ST	94103	841 HOWARD ST	15,277	Other - Entertainment/Public Asse	http://propertymap.sfplanning.org
0719/001	999 Van Ness Ave	945 VAN NESS AVE	94109	945 VAN NESS AVE	82,370	Automobile Dealership	http://propertymap.sfplanning.org
4025/003B	690 POTRERO AVE	690 POTRERO AVE	94110	690 POTRERO AVE	14,000	Office	http://propertymap.sfplanning.org
0192/004	1009 STOCKTON ST	1009 STOCKTON ST	94108	1009 STOCKTON ST	15,000	Worship Facility	http://propertymap.sfplanning.org
4347A/003	08039-Sf-evans	2090 Evans St.	94124	2090 Evans St	119,900	Non-Refrigerated Warehouse	http://propertymap.sfplanning.org

Interactive Report

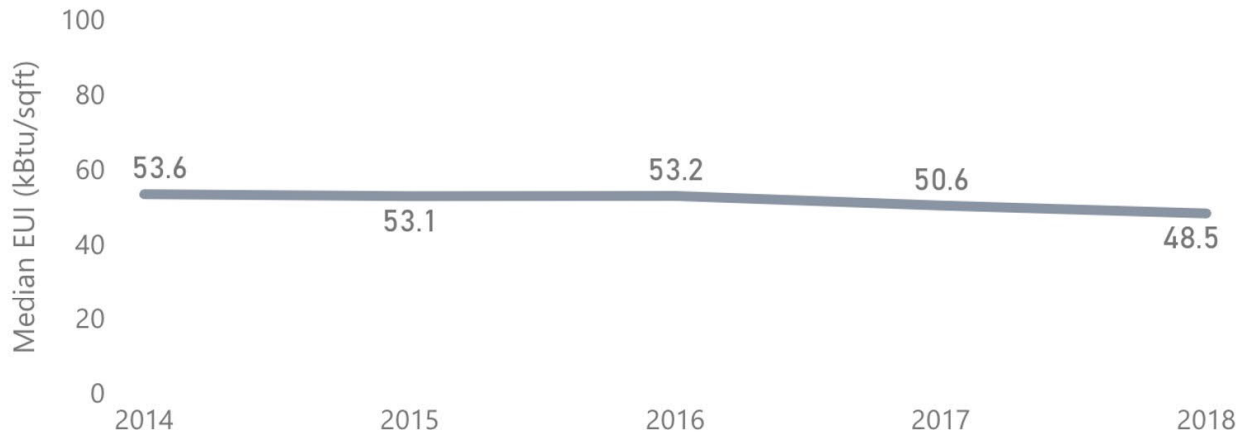


- Drill down by use, size

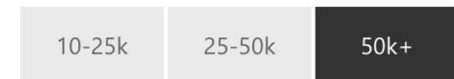
Office

344	54.0
# of Buildings	Average EUI (kBtu/sqft)
90,568,793	50.4
Total Floor Area	Median EUI (kBtu/sqft)
294,351	91
Total Emissions (Tons CO...)	Median ENERGY STAR Score

Benchmarking Results:



Square Footage Group



Benchmark Year



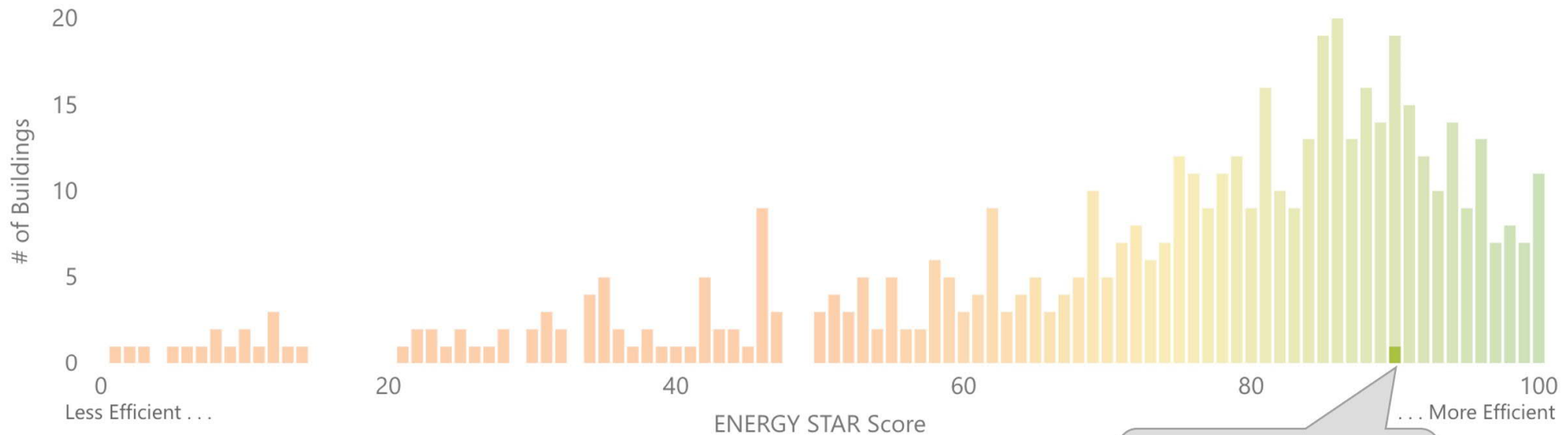
sfenvironment.org/energy/san-francisco-existing-buildings-performance-report

Interactive Report



- Highlight your building

ENERGY STAR Score Distribution



1 Bush St

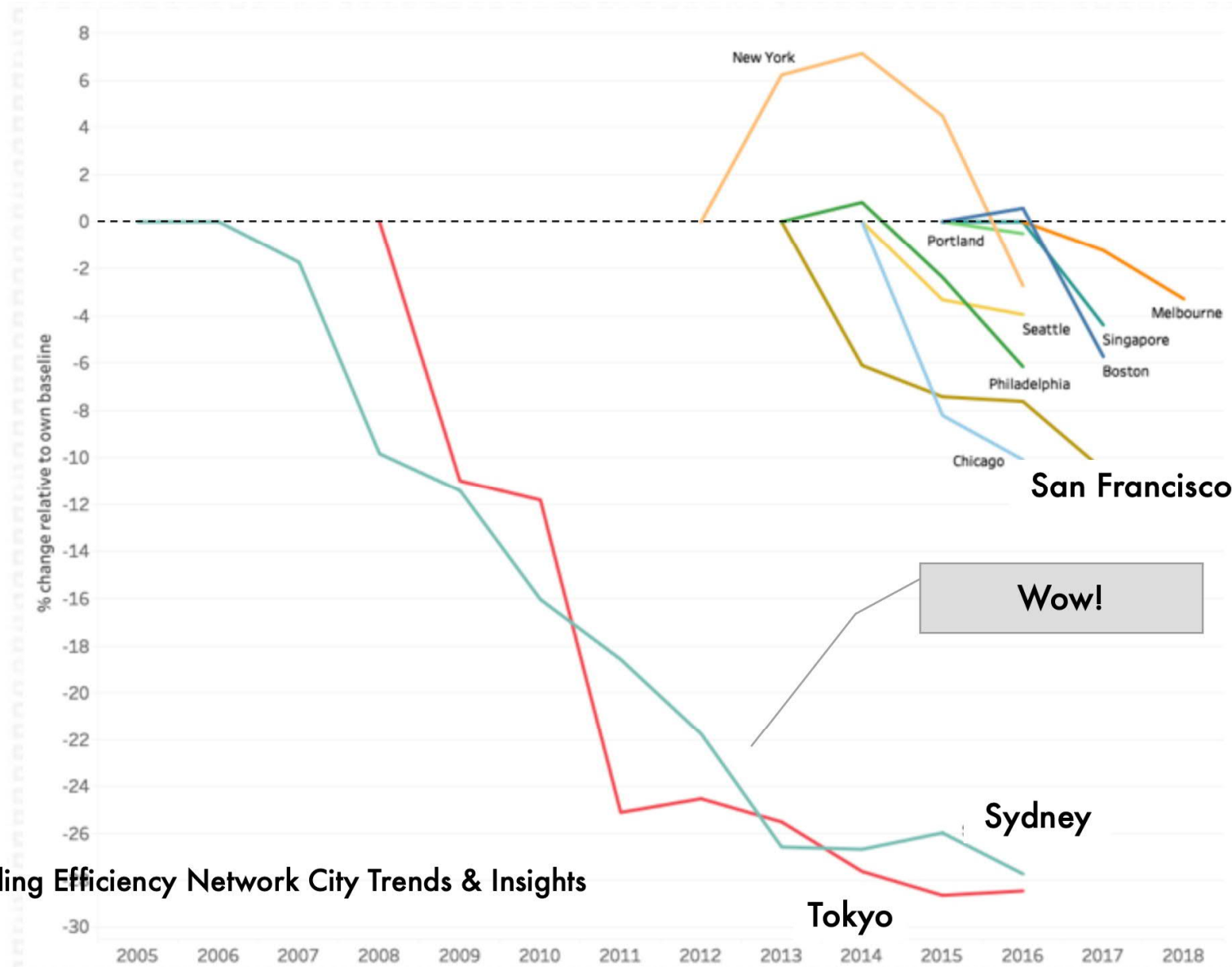
sfenvironment.org/energy/san-francisco-existing-buildings-performance-report

Benchmarking A City



Source: C40 (2019) Private Building Efficiency Network City Trends & Insights

Benchmarking A City



Source: C40 (2019) Private Building Efficiency Network City Trends & Insights

Challenges



- Utility data
 - 2009 – 2017: Issues accessing data
 - 2018 – Today: Issues with data quality
- SF has emphasized engagement and data validation, not compliance
- Uncertain connection between audits and action

Existing ~~Commercial~~ Buildings Ordinance (2019)



Buildings Affected	
Original Ordinance	
- Commercial	1,649
- Municipal	498
2019 Update	
- Mixed Multifamily & Commercial	816
- Multifamily	157
Total	3,114

100% Renewable Electricity Ordinance (2019)



- 9% of Buildings Account for 73% of Commercial Electricity
- 100% Renewable Electricity required:

Phase	Size (square feet)	Number of Buildings	Annual Electricity Use (GWh)
2022	≥500k+	63	660
2024	250-500k	113	430
2030	50-250k	471	520

Summary



	Commercial		Multifamily
	≥50,000 sq ft	10,000 - 49,999 sq ft	≥50,000 sq ft
Benchmarking	✓	✓	✓
Energy Audits	✓	✓	
Renewable Electricity	✓		

Looking to the Future – Zero Emission Building Task Force



Objectives For Zero Emission Buildings Task Force



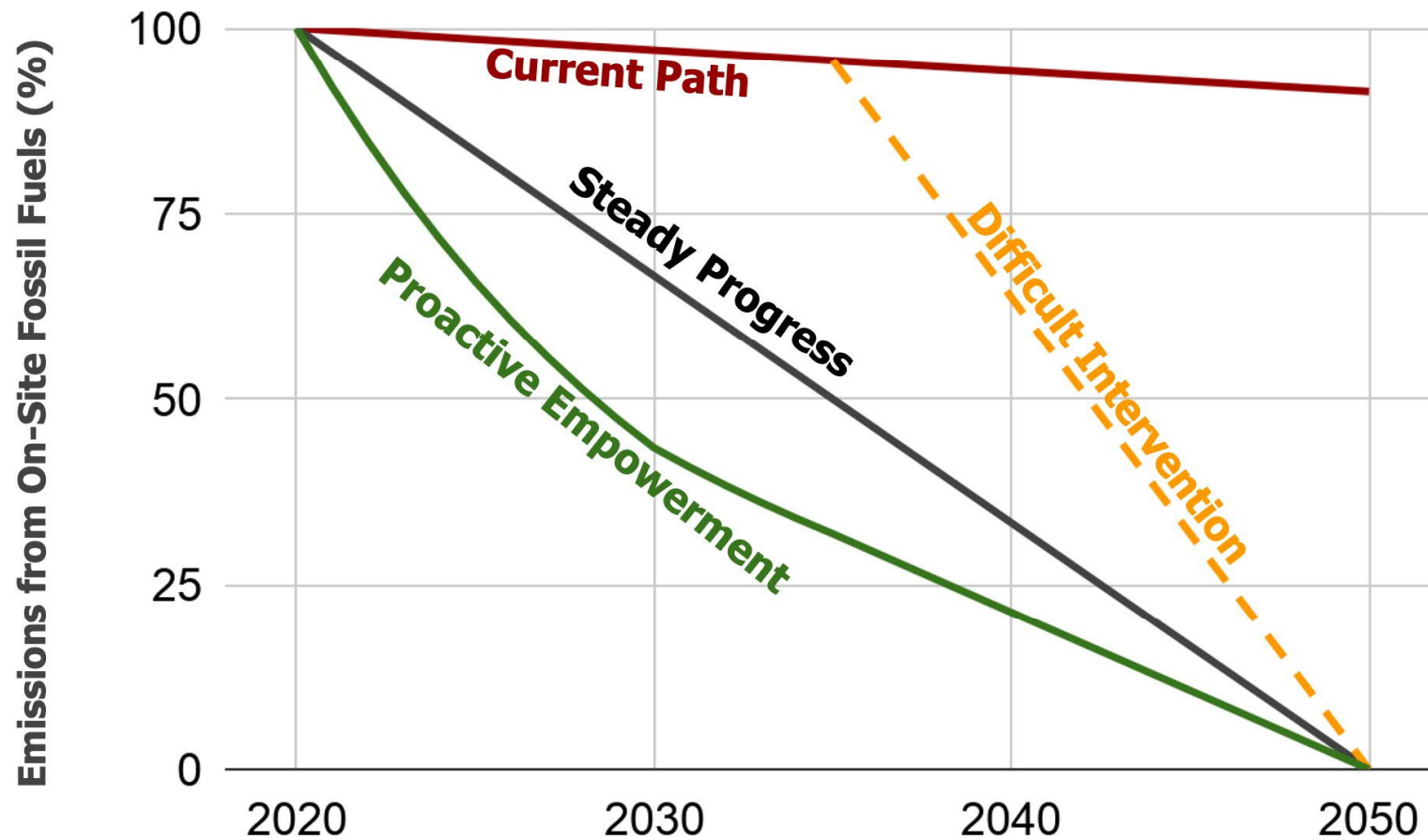
Seek insight into **how best to achieve** the Mayor's commitment to zero emissions buildings, including **when, where, and with what messages**

- **Establish expectations** for long-term partnership
- **Build trust**
- **Identify opportunities** for City engagement and action

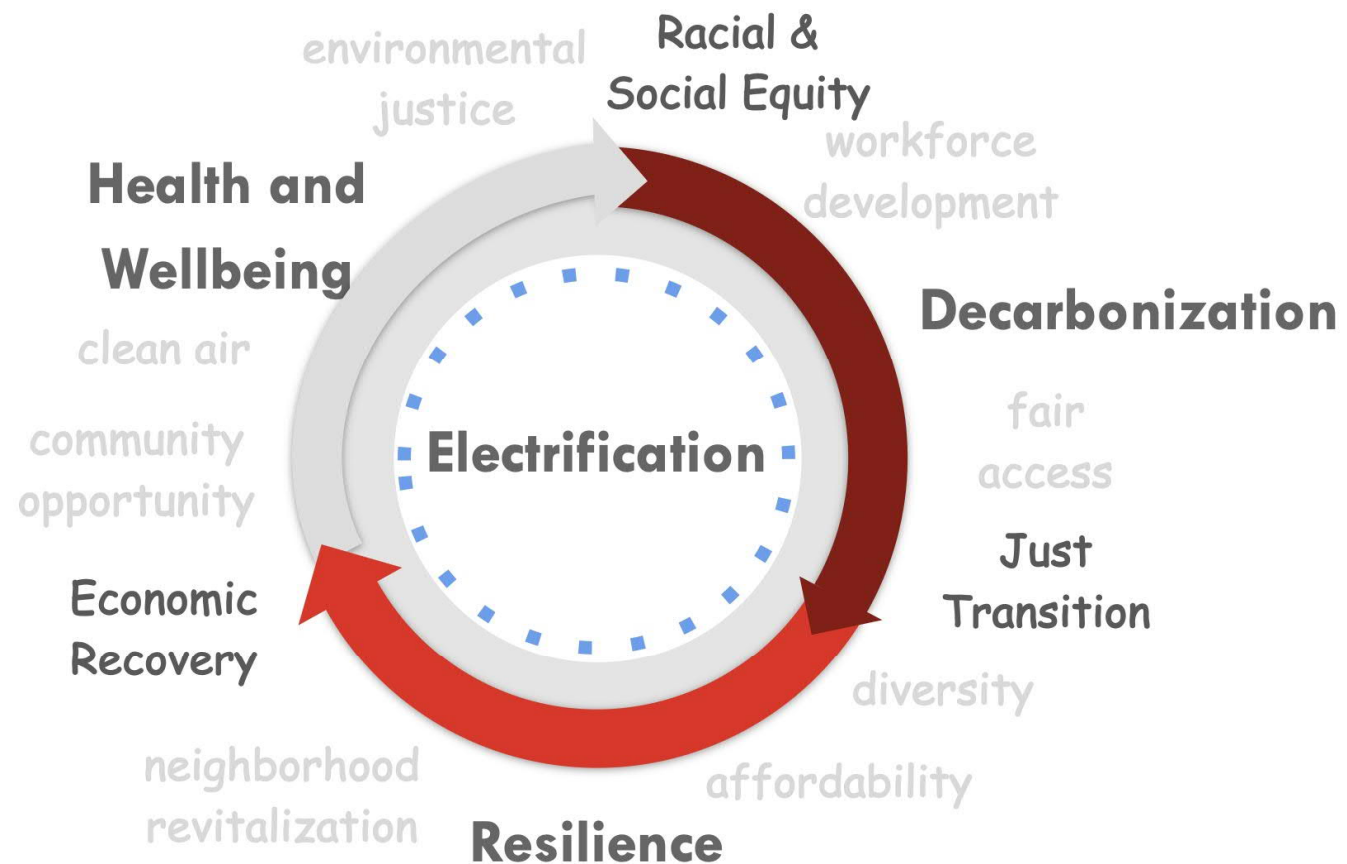
Emissions from Buildings: ↓51% since 1990

Current Emissions: 81% from gas

Paths to Zero Emission Buildings



Value and Values Align



Clarity and Commitment



Stakeholders agreed:

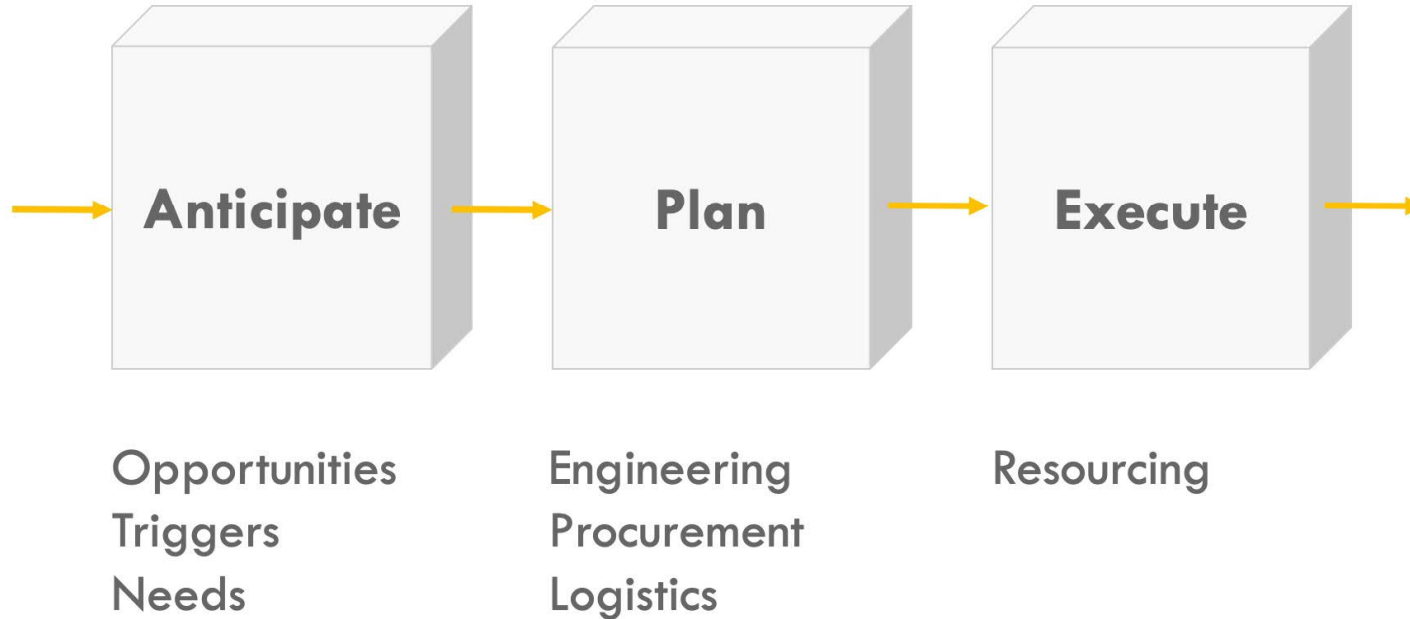
The City must **communicate about the future** – clearly and consistently.

The City must **be a partner** for the duration – and not send mixed messages.



Time and Timing

Decarbonization plans must sync with decision-making cycles.



The City must **support planning and execution** and **eliminate missed opportunities** for decarbonization.

49 Square Miles



Gas use, leakage, seismic risk, and utility fixed costs extend beyond individual property boundaries.

An **equitable transition** requires both building-scale action and a **decarbonization masterplan**.



More Info



Existing Buildings Ordinance
Focus 2030 Report for San Francisco
Automated EBO Report

sfenvironment.org/ebo
sfenvironment.org/climate_reports
<http://bit.ly/EBOreport>